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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,823

12/16/2005

Jean-Christophe Fondeur

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32300 7590 11/16/2007  
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EXAMINER

THOMAS, MIA M

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/539,823	FONDEUR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mia M. Thomas	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>see attached</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office Action is responsive to the applicant's remarks received on 20 June 2005. Claims 1-7 have been canceled and claims 8-14 are new and currently pending.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

3. The information disclosure statement filed 20 June 2005 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered. Appropriate correction is required.

### ***Specification***

4. The title of the invention is not descriptive. In fact, as submitted on the substitute specification, this application includes a title that equally resembles the title of instant application 10/539,822. It is unclear to the examiner if the applicant intended to use the title as specifically disclosed on June 20, 2005 which reads as "Method of Determining the Living Character of an Bearing Carrying a Fingerprint", otherwise a new title is required that is clearly indicative of the

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invention to which the claims are directed and how that title distinguishes over instant applicant 10/539,822 with the similar title.

The following title is suggested: "Method and Device for Determining the Living Character of an object Bearing a Fingerprint."

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 8-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Gozzini (US 6,665,428 B1).

**Regarding Claim 8:** Gozzini discloses a method of determining the living character of an element carrying a fingerprint and placed on a fingerprint sensor having an optical system, ("Within a capacitive fingerprint detection device, finger detection is provided by a plurality of resistive grids overlying the fingerprint sensor electrodes to measure the resistance of the finger placed on the sensor surface. A finger placed on the sensor surface connects the resistive rids and allows the skin resistivity to be measured. The measured resistance is compared to a reference resistance or range of resistances to determine whether the measured resistance matches the expected bio-characteristics of living skin tissue." at column 2, line 3)

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the method comprising the steps of:

- (a) measuring an electrical quantity of the element (Refer to Figure 1, "FIG. 1 depicts a fingerprint sensor circuit employing resistive finger detection in accordance with a preferred embodiment of the present invention..." at column 2, line 23);
- (b) determining the living character of the element when the electrical quantity measured belongs to a range of quantities judged acceptable ("Referring to FIGS. 2A and 2B, diagrams of sensor arrays including resistive finger detection in accordance with a preferred embodiment of the present invention are illustrated. The cross-section depicted in FIG. 2A is a cross-section of sensor array 108 taken at section line A--A depicted in FIG.1. Cells 116 within sensor array 108 each include at least one capacitive fingerprint sensor electrode 202, which is employed to detect the fingerprint in accordance with the known art. A protective layer 204, which may be a combination of insulating and passivating layers, overlies the fingerprint sensor electrodes 202 and provides a surface on which the finger is placed." at column 3, line 36);
- (c) taking of an image of the fingerprint carried by the element by means of the optical system ("In this manner an electronic image of the fingerprint may be captured for further processing." at column 1, line 51);
- (d) measurement of a particular characteristic of the image and deducing of a range of values from the electrical quantity judged in principle acceptable using a relationship established between values of a particular characteristic of the image and a range of values judged acceptable ("Thus, for example, the capacitance measured by sensor 402 at a point near the top of a fingerprint ridge 410 by a sensing electrode separated from skin surface 408 by a distance  $d_{x,y}$  (where x and y denote the position of the respective sensing electrode within the two-dimensional sensor array) will differ from the capacitance measured through another sensing electrode at a point near the bottom of a fingerprint valley 412, where the intervening distance  $d_{x,y+2}$  is greater." at column 1, line 43);

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and (e) validation of the value of the electrical quantity measured if this measurement is situated in the range (Refer to Figure 4, numeral 308).

**Regarding Claim 9:** Gozzini discloses wherein the particular characteristic is selected from the group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the said fingerprints, and the average greyscale of the ridges ("Sensor circuit 102 also includes an array 108 of capacitive sensors for fingerprint acquisition by sensing distances between capacitive electrodes within the sensor array 108 and ridges and grooves on a finger placed in contact with sensor array 108." at column 3, line 4).

**Regarding Claim 10:** Gozzini discloses wherein the electrical quantity is the impedance whose value is measured at the terminals of electrodes that the sensor has ("The structure of a typical electronic fingerprint sensor is depicted in FIG. 4. Fingerprint sensor 402 includes a planar array of sensing electrodes 404 conductively coupled to detection and image capture circuitry (not shown). Sensing electrodes 404 may be covered by a protective layer 406 against which the skin surface 408 of the fingertip is placed. Ridges 410 and valleys 412 formed by the lines on the fingertip skin surface 408 are then detected utilizing sensing electrodes 404." at column 1, line 29).

**Regarding Claim 11:** Gozzini discloses claimed elements that equally resemble those claimed elements of Claim 8. Claim 11 is rejected for the same reasons as stated above at Claim 8. Specifically for claimed element 11(d), means for establishing the relationship between values of a particular characteristic of the image and a range of values judged acceptable (Refer to Figure 3, numeral 308).

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**Regarding Claim 12:** Gozzini discloses an optical system for measuring a quantity selected from the group consisting of: the contrast of the image, the average greyscale of the image, the width of the images of the ridges formed by the said fingerprints, and the average greyscale of the said ridges (Refer to Figure 1; "...in particular with reference to FIG. 1, a fingerprint sensor circuit employing resistive finger detection in accordance with a preferred embodiment of the present invention is depicted. FIG. 1 depicts a block diagram of the sensor circuit 102, which is formed as an integrated circuit on a single die. A suitable sensor circuit 102 and its operation are described more fully in commonly assigned, application Ser. No. 09/040,261, entitled "CAPACITIVE DISTANCE SENSOR" and filed May 9, 1998, which is incorporated herein by reference." at column 2, line 53). Claim 12 has claimed elements that equally resemble those claimed elements of claim 9 and are therefore rejected under the same reasons as stated above at claim 9.

**Regarding Claim 13:** Gozzini discloses claimed elements that equally resemble those claimed elements of claim 10 and are therefore rejected under the same reasons as stated above at claim 10.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gozzini (US 6,665,428 B1) in combination with Lee (US 6,952,490 B2)

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**Regarding Claim 14:**

Gozzini discloses an optical system with all the claimed elements as rejected above in the 102 rejection.

Gozzini does not specifically disclose wherein the electrodes are formed on a transparent plate, the connections to the electrodes being conductive and also transparent, however,

Lee teaches wherein the electrodes are formed on a transparent plate, the connections to the electrodes being conductive and also transparent (Refer to Figure 1 or Figure 2, numeral 2; "...there is provided a method for fabricating a fingerprint recognizing device comprising the steps of: forming a transparent insulating layer using a transparent insulating material; forming a transparent electrode layer on the transparent insulating layer using a transparent conductive material..." at column 2, line 12).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to model the optical system to have the electrodes [to be] formed on a transparent plate, the connections to the electrodes being conductive and also transparent as taught by Lee with the optical system as disclosed by Gozzini because the transparent electrode layer eases the processing of the image (fingerprint) received. The transparent layer forms a ground contact when being contacted with the finger and emits light that focuses highly on the ridgelines or minutia of each finger analyzed additionally, it also creates a stronger focus on the fingerprint images as formed by the finger. The transparency resolves any embezzlement or potential infringement of identification or fingerprint recognition through the advanced material being used herein. (Lee, Background, Prior Art, Column 1).



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**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,088,817 A

US 5,963,657 A

US 6,263,091 B1

US 7,181,052 B2

US 6,067,368 A

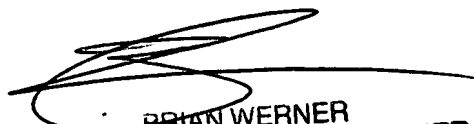
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is 571-270-1583. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Mia M. Thomas

Mia M Thomas  
Examiner  
Art Unit 2624

  
BRIAN WERNER  
SUPERVISORY PATENT EXAMINER